

$$f(x) = (x^2 - 1)^3 \quad D = \mathbb{R}$$

~~$$f(x) = x \cdot (x-1)^3$$~~ \neq Symmetrie

~~NSZ~~

$$\begin{aligned} P(x) &= (x^2 - 1) \cdot (x^2 - 1) \cdot (x^2 - 1) \\ &= x^6 - x^4 - x^4 - x^4 + x^2 + x^2 + x^2 - 1 \\ &= x^6 - 3x^4 + 3x^2 - 1 \quad \checkmark \end{aligned}$$

$$P'(x) = 6x^5 - 12x^3 + 6x = 6x(x^4 - 2x^2 + 1)$$

$$f'(x) = 6x \cdot (x^2 - 1)^2$$

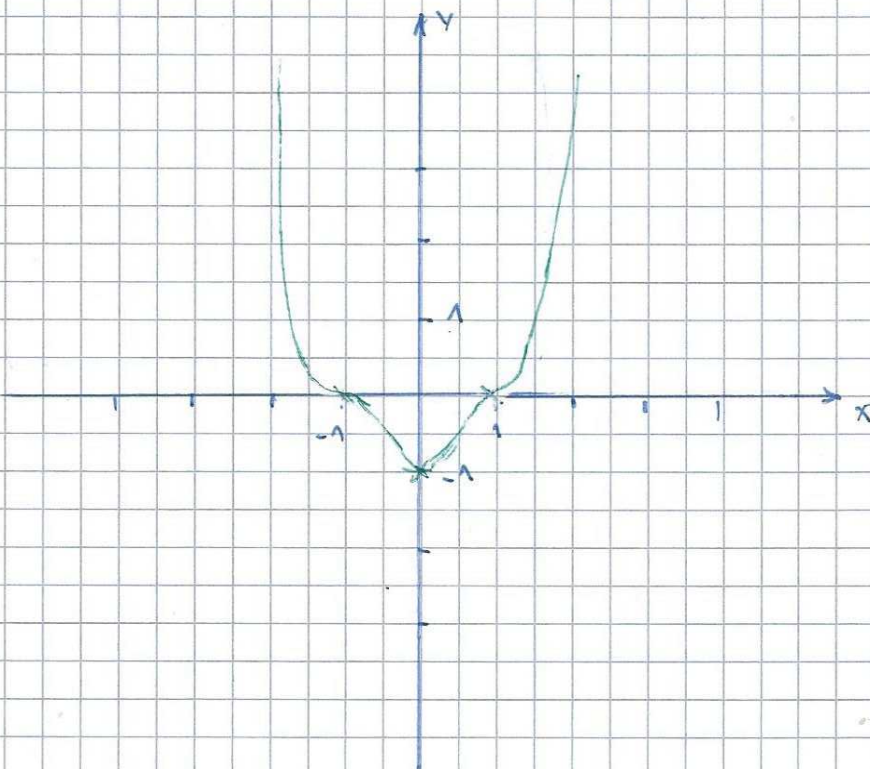
$$f(0) = (0^2 - 1)^3$$

$$x_1 = 0; \quad x_2 = 1; \quad x_3 = -1$$

$$= -1 \quad S_y(0|-1)$$

~~doppelt~~
~~dreifach~~ ~~doppelt~~
~~dreifach~~

x	$-\infty < x < -1$	$x = -1$	$-1 < x < 0$	$x = 0$	$0 < x < 1$	$x = 1$	$1 < x < \infty$
$P'(x)$	-	0	-	0	+	0	+
$f(x)$	smf	TP(-1/0)	smf	Min(0 -1)	sms	TP(1/0)	sms



$$\lim_{x \rightarrow \infty} (x^2 - 1)^3 = \infty$$

$$\lim_{x \rightarrow -\infty} (x^2 - 1)^3 = \infty$$

